

CLAIM AMENDMENTS

IN THE CLAIMS

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

1. **(Currently Amended)** A method for detaching a frozen charge from the inner wall of a grinding pipe, comprising the steps of:

- controlling a drive device of the grinding pipe to control the angle of rotation and the speed of rotation of the grinding pipe; and
- varying the speed of rotation of the grinding pipe by the drive device such that the varied rotational speed causes in-order-to-detach the frozen charge to detach from the inner wall of the grinding pipe.

2. (Previously Presented) The method according to claim 1, wherein a maximum value of the angle of rotation smaller than 180° is not exceeded.

3. (Previously Presented) The method according to claim 1, wherein that a maximum value of the angle of rotation smaller than or equal to 90° is not exceeded.

4. (Previously Presented) The method according to claim 1, wherein the maximum value of the angle of rotation is dependent on the material nature of the frozen charge.

5. (Previously Presented) The method according to claim 1, wherein the angle of rotation is set to oscillate about a number of predetermined angles of rotation with the same arithmetic sign one after another.

6. **(Currently Amended)** The method according to claim ~~[[5]]~~ 1, wherein the angle of rotation is set to oscillate about a number of predetermined angles of rotation with different arithmetic signs one after another.

7. (Previously Presented) The method according to claim 1, wherein the grinding pipe is braked abruptly at least once at a predetermined angle of rotation.

8. (Previously Presented) The method according to claim 7, wherein the grinding pipe is braked abruptly to a standstill.

9. (Previously Presented) The method according to claim 1, wherein the same motor is used for detaching the frozen charge as for rotating the grinding pipe during grinding operation.

10. (Previously Presented) The method according to claim 1, wherein the frozen charge is wetted.

11. (Currently Amended) A control device for the drive device of a grinding pipe, the control device comprising:

means for defining an operating cycle for the grinding pipe, the operating cycle defining oscillations in the angle of rotation of the grinding pipe about at least one predetermined angle of rotation offset from a resting position of the grinding pipe; and
means for controlling the drive device according to the defined operating cycle such that the drive device oscillates the angle of rotation of the grinding pipe about the least one predetermined angle of rotation.

~~—a controller controlling the drive device of the grinding pipe for targeted detachment of a frozen charge, the controller including instructions for:~~

~~—controlling an angle of rotation and speed of rotation of the grinding pipe, and~~

~~—varying the angle of rotation and the speed of rotation of the grinding pipe in order to detach the frozen charge from the grinding pipe.~~

12. (Previously Presented) The control device according to claim 11, comprising means for defining an operating cycle for the grinding pipe.

13. (Previously Presented) The control device according to claim 11, comprising a field-oriented regulating arrangement.

14. (Currently Amended) A system comprising:
a drive device for a grinding pipe; and
~~comprising~~ a control device ~~for the drive device, the control device~~ configured to control the drive device of the grinding pipe for targeted detachment of a frozen charge, the control device including:

means for defining an operating cycle for the grinding pipe, the operating cycle defining oscillations in the angle of rotation of the grinding pipe about at least one predetermined angle of rotation offset from a resting position of the grinding pipe; and

means for controlling the drive device according to the defined operating cycle such that the drive device oscillates the angle of rotation of the grinding pipe about the least one predetermined angle of rotation.

~~instructions for:~~

~~controlling the speed of rotation of the grinding pipe, and~~

~~varying the speed of rotation of the grinding pipe in order to detach the frozen charge from the grinding pipe.~~

15. (Currently Amended) The system ~~drive device~~ according to claim 14, comprising a motor which drives the grinding pipe both during grinding operation and for detaching the frozen charge.

16. (Currently Amended) The system ~~drive device~~ according to claim 15, wherein the motor is coupled to a converter.

17. (Currently Amended) The system ~~drive device~~ according to claim 15, wherein the motor is a ring motor.

18. Cancelled

19. (Currently Amended) The method according to [[Claim]] claim 1, comprising:

controlling the drive device to oscillate the angle of rotation of the grinding pipe about at least one predetermined angle of rotation.

20. (Currently Amended) The control device according to [[Claim]] claim 11, wherein the ~~controller includes instructions for controlling the drive device to oscillate~~ operating cycle defines oscillations in the angle of rotation of the grinding pipe about ~~at least one~~ a particular predetermined angle of rotation such that during the oscillation about the particular predetermined angle of rotation, the grinding pipe does not rotate through the resting position of the grinding pipe.

21. (Currently Amended) The ~~control device~~ system according to [[Claim 11]] claim 14, wherein the ~~controller includes instructions for controlling the drive device to oscillate~~ operating cycle defines oscillations in the angle of rotation of the grinding pipe about ~~at least one~~ a particular predetermined angle of rotation such that during the oscillation about the particular predetermined angle of rotation, the grinding pipe does not rotate through the resting position of the grinding pipe.

22. (New) A method for detaching a frozen charge from the inner wall of a grinding pipe, comprising the steps of:

controlling a drive device of the grinding pipe to control the angle of rotation and the speed of rotation of the grinding pipe; and

controlling the drive device to oscillate the angle of rotation of the grinding pipe about at least one predetermined angle of rotation in order to detach the frozen charge from the inner wall of the grinding pipe.

23. (New) The method according to claim 19, comprising controlling the drive device to oscillate the angle of rotation of the grinding pipe about at least one non-zero angle of rotation as measured from a resting position of the grinding pipe.

24. (New) The method according to claim 19, wherein during the oscillation of the grinding pipe, a maximum angle of rotation of less than 180° is not exceeded.

25. (New) The method according to claim 19, wherein during the oscillation of the grinding pipe, a maximum angle of rotation of less than 90° is not exceeded.

26. (New) The method according to claim 19, further comprising:
determining a maximum angle of rotation based on a material nature of the frozen charge; and

during the oscillation of the grinding pipe, limiting the rotation of the grinding pipe to the determined maximum angle of rotation.

27. (New) The method according to Claim 19, wherein the angle of rotation is set to oscillate about a number of different predetermined angles of rotation with the same arithmetic sign.

28. (New) The method according to Claim 19, wherein the angle of rotation is set to oscillate about a number of different predetermined angles of rotation with different arithmetic signs.

29. (New) The method according to Claim 19, wherein the grinding pipe is braked abruptly at least once at a predetermined angle of rotation.

30. (New) The method according to Claim 19, wherein the same motor is used for oscillating the angle of rotation of the grinding pipe to detach the frozen charge as for rotating the grinding pipe during a grinding operation.